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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Michael Christopher MARTIN, et al.	Conf. No. 4861
Appln. No.	: 09/846,568	Group Art unit: 2154
Filed	: May 1, 2001	Examiner: J. Chang
For	: **METHOD FOR ADAPTING AN INTERNET WEB SERVER TO SHORT-TERM CHANGES IN DEMAND**	

SUPPLEMENTAL APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Commissioner for Patents
U.S. Patent and Trademark Office
Customer Window, Mail Stop Appeal Brief-Patents
Randolph Building
401 Dulany Street
Alexandria, VA 22314
Sir:

The instant Supplemental Appeal Brief is responsive to the Notice of Non-Compliant Appeal Brief mailed on July 12, 2007. Appellant has revised the Summary of the Claimed Invention (Section V) to correct the page and line number of a feature of claim 20 consistent with the Notice of Non-Compliant Appeal Brief. The table of contents has also been changed to identify the Appendices as Section Numbers VIII-X.

This appeal is from the Examiner's final rejection of claims 1-20 as set forth in the Final Office Action of October 13, 2006. A Notice of Appeal, in response to the October 13, 2006 Final Office Action, was filed on January 30, 2007.

Payment in the amount of $ 500.00 was previously submitted as payment of the requisite fee under 37 C.F.R. 41.20(b)(2). No additional fee is believed to be required for filing the instant Appeal Brief. However, if for any reason a necessary fee is required for consideration of the instant paper, authorization is hereby given to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No. 19-0089. 09-0457.

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(I) REAL PARTY IN INTEREST

The real party in interest is International Business Machines Corporation by an assignment recorded in the U.S. Patent and Trademark Office on May 1, 2001, at Reel 011767 and Frame 0884.

(II) RELATED APPEALS AND INTERFERENCES

No related appeals and/or interferences are pending.

(III) STATUS OF THE CLAIMS

Claims 1-20 stand finally rejected. Claims 1-20 are pending and are the subject of this appeal. The claims in issue are attached in the "Claims Appendix".

(IV) STATUS OF THE AMENDMENTS

A Response under 37 C.F.R.§ 1.116 was filed December 13, 2006, requesting reconsideration of the finally rejected claims. The Examiner responded with an Advisory Action mailed January 9, 2007, indicating that the Response was considered, but did not place the application in condition for allowance. Appellant submits that no other amendments after final have been filed; however, all amendments to the claims have been entered.

(V) SUMMARY OF THE CLAIMED SUBJECT MATTER

A. The Claimed Subject Matter

1. INDEPENDENT CLAIM 1

With reference to pages 4-7 of the instant application and to the figures, and by way of non-limiting example, the invention provides for a method for adapting to change

in a demand on a web server (130), comprising associating session tracking objects with browsers (110A-110N) that access a web server (page 5, lines 8-10 of the specification). The session tracking objects include identifications of web pages requested by the browsers (page 5, lines 10-11 of the specification). The method further includes analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server (page 6, line 9 to page 7, line 9 of the specification).

2. INDEPENDENT CLAIM 9

With reference to pages 4-7 of the instant application and to the figures, and by way of non-limiting example, the invention provides for a method for adapting to change in a demand on a web server (130), comprising associating session tracking objects with browsers (110A-110N) that access a web server (page 5, lines 8-10 of the specification). The session tracking objects include identifications of web pages requested by the browsers (page 5, lines 10-11 of the specification). The method further includes analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server (page 6, line 9 to page 7, line 9 of the specification), and altering a server cache responsive to the caching priorities (page 6, lines 15-17 of the specification).

3. INDEPENDENT CLAIM 20

With reference to pages 4-7 of the instant application and to the figures, and by way of non-limiting example, the invention provides for a method for adapting to change in a demand on a web server (130), comprising determining whether HTTP session

objects exist for browsers (page 5, lines 6-8 of the specification). The HTTP session objects enable session tracking (page 5, lines 11-14 of the specification). The method further includes associating session tracking objects with the browsers that access a web server which includes a plurality of servlets (140A-140M), a caching algorithm (page 4, line 11 of the specification), and a fast memory cache (150). The session tracking objects include identifications of web pages requested by the browsers (page 5, lines 10-11 of the specification). If an HTTP session object does not exist for one of browsers which requested one of the web pages, the method provides for creating with the web server an HTTP session object for the browser (page 6, lines 4-5 of the specification). The method further includes analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server (page 6, line 9 to page 7, line 9 of the specification), and altering a server cache responsive to the caching priorities (page 6, lines 15-17 of the specification). The method ensures that a web site adapts to changes in demand (page 3, lines 2-3 of the specification).

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1 and 4-11 (and presumably also claims 12, 15, 16, 18 and 19) are improperly rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,775,695 issued to SARUKKAI in view of U.S. Patent No. 6,415,368 issued to GLANCE et al.

Whether claims 2 and 3 are improperly rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,775,695 issued to SARUKKAI in view of U.S. Patent No. 6,415,368 issued to GLANCE et al., and further in view of U.S. Patent Application Publication 2003/0041143 to RONALD et al.

Whether claims 13, 14 and 17 are improperly rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,775,695 issued to SARUKKAI

in view of U.S. Patent No. 6,415,368 issued to GLANCE et al., and further in view of U.S. Patent Application Publication 2002/0156881 to KLOPP LEMON et al.

Whether claim 20 is improperly rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,760,765 issued to ASAI et al. in view of U.S. Patent Application Publication 2003/0074580 to KNOUSE et al., and further in view of U.S. Patent No. 6,415,368 issued to GLANCE et al.

(VII) ARGUMENT RE. 103(a) REJECTIONS

The rejection of claims 1 and 4-11 (and claims 12, 15, 16, 18 and 19) under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,775,695 issued to SARUKKAI in view of U.S. Patent No. 6,415,368 issued to GLANCE et al. is improper and should be withdrawn.

REJECTION OF INDEPENDENT CLAIM 1 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 1 is directed to a method for adapting to change in a demand on a web server and recites, in pertinent part: associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers and analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server. These features are not disclosed or suggested by the combination of SARUKKAI and GLANCE.

Appellant does not dispute that SARUKKAI relates to document caching with a server (see col. 1, lines 6-9). Nor does Appellant dispute that the disclosed system is

capable of "monitoring the number of documents requested by a client in a current session, placing a document requested by the client in a file cache according to a caching algorithm that is based, at least in part, on the number of documents requested by the client in the current session, and accessing the document in the file cache when the document is requested subsequently by the client. The wide area network is typically the Internet" (see col. 2, lines 14-21).

Appellant submits, however, that SARUKKAI stores the document itself into the cache based on the probability that it will be requested (see col. 8, lines 32-43). In contrast, the invention provides for associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers. As the Examiner will note from page 5, lines 3-16 of the instant specification, session tracking objects constitute information about the requests for web pages by the browsers and this information identifies each of the browsers. This distinction is not without a difference because the instant invention enables session tracking of the session objects in order to detect changes in demand more rapidly.

GLANCE does not cure the deficiencies of SARUKKAI. GLANCE merely discloses a system and method of caching based on a recommender system. The disclosed system employees a democratic caching generally shown by reference numeral 10. A recommender system 16 provides value information pertaining to items to be stored in cache 24 based on user input (col. 4, liens 43-53) that includes implicit site recommendations (col. 5, lines 24-55) and explicit URL recommendations (col. 5,

lines 65 et seq.). GLANCE, like SARUKKAI, simply does not disclose or suggest associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers. GLANCE does not even determine caching priorities for the server by analyzing the identifications of web pages requested by the browsers.

As GLANCE fails to cure the deficiencies of SARUKKAI, GLANCE cannot serve to provide the motivation to combine these references. Furthermore, even if SARUKKAI and GLANCE were properly combinable, the combination would not result in the invention as recited in at least claim 1 including, *inter alia*, analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least independent claim 1.

REJECTION OF INDEPENDENT CLAIM 9 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 9 is directed to a method for adapting to change in a demand on a web server and recites, in pertinent part: associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of

web pages requested by the browsers and analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server. Claim 9 also recites altering a server cache responsive to the caching priorities. These features are not disclosed or suggested by the combination of SARUKKAI and GLANCE.

Appellant does not dispute that SARUKKAI relates to document caching with a server (see col. 1, lines 6-9). Nor does Appellant dispute that the disclosed system is capable of "monitoring the number of documents requested by a client in a current session, placing a document requested by the client in a file cache according to a caching algorithm that is based, at least in part, on the number of documents requested by the client in the current session, and accessing the document in the file cache when the document is requested subsequently by the client. The wide area network is typically the Internet" (see col. 2, lines 14-21).

Appellant submits, however, that SARUKKAI stores the document itself into the cache based on the probability that it will be requested (see col. 8, lines 32-43). In contrast, the invention provides for associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers. As the Examiner will note from page 5, lines 3-16 of the instant specification, session tracking objects constitute information about the requests for web pages by the browsers and this information identifies each of the browsers. This distinction is not without a difference because the instant invention enables session tracking of the session objects in order to detect changes in demand more rapidly.

GLANCE does not cure the deficiencies of SARUKKAI. GLANCE merely discloses a system and method of caching based on a recommender system. The disclosed system employees a democratic caching generally shown by reference numeral 10. A recommender system 16 provides value information pertaining to items to be stored in cache 24 based on user input (col. 4, liens 43-53) that includes implicit site recommendations (col. 5, lines 24-55) and explicit URL recommendations (col. 5, lines 65 et seq.). GLANCE, like SARUKKAI, simply does not disclose or suggest associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers. GLANCE does not even determine caching priorities for the server by analyzing the identifications of web pages requested by the browsers.

As GLANCE fails to cure the deficiencies of SARUKKAI, GLANCE cannot serve to provide the motivation to combine these references. Furthermore, even if SARUKKAI and GLANCE were properly combinable, the combination would not result in the invention as recited in at least claim 9 including, *inter alia*, analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least independent claim 9.

REJECTION OF DEPENDENT CLAIM 4 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 3 of the Final Office Action, the Examiner cites col. 2, lines 43-47 and col. 4, lines 1-38 of SARUKKAI as disclosing that the session tracking objects are HTTP session objects. Appellant respectfully disagrees.

The cited language merely discloses the following:

> The step of monitoring the number of documents requested may be performed across two or more web servers in the current session. In addition, the step of monitoring the number of documents requested may be performed across one or more timeouts in the current session.
>
> Hewlett-Packard Laboratories proxy on June 1, 1998. The traces are logs of client sessions on the Internet. The X axis represents each unique document referenced in the trace, and the Y axis corresponds to the number of times the documents have been accessed, plotted in a log--log scale.
>
> A different way of looking at web surfing and document accesses is to view it from the perspective of client behavior patterns. Huberman et al. in "Strong Regularities in World Wide Web Surfing," Journal of Science, Vol. 280, Apr. 1998, observe in their "surfing law" that models of client surfing activity can be built in very similar lines to real options in financial economics. This perspective provides a rich normative model of web surfing and predicts the number of links that a user follows before deciding it would not be worthwhile to proceed further. The random variable that denotes the number of links that a user follows before stopping is shown to exhibit a long tail.
>
> From the perspective of analyzing traces to determine the number of links followed in a client session, the work by Huberman et al. considers a session to be consecutive hits to the same server by the client. The analysis of each of these session lengths reveals a Zipf distribution. However, sessions are defined herein to include multiple servers accessed in a single session and to include long periods of inactivity from the clients. This captures the true nature of client surfing, which often crosses multiple server boundaries. Even with this more

> general definition of sessions, a similar pattern in session length distribution is observed. FIG. 3 is a plot of session depth versus number of requests at that depth in a session for the same traces plotted in FIG. 2. The X axis corresponds to session depth, and the Y axis corresponds to the number of documents requested at that depth, plotted on a log--log scale. Session depth may be defined as the number of documents requested by the client in the current session. It is clear that this characteristic also follows a long-tailed distribution, implying that most users follow very few links before perceiving that they have found all the information that is to be found.

While it is true that the above-noted language discusses sessions, session lengths and session depths, there is no specific language disclosing or suggesting that the session tracking objects are HTTP session objects. Appellant also submits that dependent claim 4 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 4.

REJECTION OF DEPENDENT CLAIM 7 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 7 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 4 of the Final Office Action, the Examiner cites col. 11, lines 8-13 of SARUKKAI as disclosing that the act of analyzing is performed periodically. Appellant respectfully disagrees. The cited language merely discloses the following:

> A processor-implemented method for caching documents requested by a

> plurality of clients in a file cache, comprising: counting a respective total number of document requests by each client for all documents requested by the client over a selected time interval

While it is true that the above-noted language discusses a selected time interval, there is no specific language disclosing or suggesting that the act of analyzing is performed periodically. Appellant also submits that dependent claim 7 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 7.

REJECTION OF DEPENDENT CLAIM 12 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 12 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 5 of the Final Office Action, the Examiner cites col.1, lines 22-30 of SARUKKAI as disclosing that the method ensures that a web site adapts to changes in demand. Appellant respectfully disagrees. The cited language merely discloses the following:

> A file cache may be associated with the proxy server. The file cache is a device for storage of documents that are likely to be reused by clients on the local area network. The file cache may have the form of memory in the proxy server, a hard disk associated with the proxy server, or any other type of memory. When a requested document is present in the file cache, in can be retrieved with lower latency and at lower cost as compared with obtaining the same document from a remote web server. In addition, Internet traffic is reduced.

While it is true that the above-noted language discusses retrieving documents that are already stored in a cache, there is no specific language disclosing or suggesting that the method ensures that a web site adapts to changes in demand. Appellant also submits that dependent claim 12 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 12.

REJECTION OF DEPENDENT CLAIM 15 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 15 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 5 of the Final Office Action, the Examiner cites col. 2, lines 43-47 and col. 4, lines 1-38 of SARUKKAI as disclosing that the method of claim 1 further comprises determining whether an HTTP session object exists for one of the browsers. Appellant respectfully disagrees.

The cited language merely discloses the following:

> The step of monitoring the number of documents requested may be performed across two or more web servers in the current session. In addition, the step of monitoring the number of documents requested may be performed across one or more timeouts in the current session.

Hewlett-Packard Laboratories proxy on June 1, 1998. The traces are logs of

client sessions on the Internet. The X axis represents each unique document referenced in the trace, and the Y axis corresponds to the number of times the documents have been accessed, plotted in a log--log scale.

A different way of looking at web surfing and document accesses is to view it from the perspective of client behavior patterns. Huberman et al. in "Strong Regularities in World Wide Web Surfing," Journal of Science, Vol. 280, Apr. 1998, observe in their "surfing law" that models of client surfing activity can be built in very similar lines to real options in financial economics. This perspective provides a rich normative model of web surfing and predicts the number of links that a user follows before deciding it would not be worthwhile to proceed further. The random variable that denotes the number of links that a user follows before stopping is shown to exhibit a long tail.

From the perspective of analyzing traces to determine the number of links followed in a client session, the work by Huberman et al. considers a session to be consecutive hits to the same server by the client. The analysis of each of these session lengths reveals a Zipf distribution. However, sessions are defined herein to include multiple servers accessed in a single session and to include long periods of inactivity from the clients. This captures the true nature of client surfing, which often crosses multiple server boundaries. Even with this more general definition of sessions, a similar pattern in session length distribution is observed. FIG. 3 is a plot of session depth versus number of requests at that depth in a session for the same traces plotted in FIG. 2. The X axis corresponds to session depth, and the Y axis corresponds to the number of documents requested at that depth, plotted on a log--log scale. Session depth may be defined as the number of documents requested by the client in the current session. It is clear that this characteristic also follows a long-tailed distribution, implying that most users follow very few links before perceiving that they have found all the information that is to be found.

While it is true that the above-noted language discusses sessions, session lengths and session depths, there is no specific language disclosing or suggesting determining whether an HTTP session object exists for one of the browsers. Appellant also submits that dependent claim 15 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or

even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 15.

REJECTION OF DEPENDENT CLAIM 16 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 16 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 5 of the Final Office Action, the Examiner explains that the rejection of claim 16 is "for the same reasons set forth in claim 1 above". Appellant respectfully submits that the Examiner has failed to set forth a prima facie case of unpatentability.

Claim 16 depends from claim 1 and further recites writing into an HTTP session object that is associated with one of the browsers an identification of a requested web page. The Examiner has not identified where in SARUKKAI or GLANCE there is found language which discloses or suggest this feature. Appellant also submits that dependent claim 16 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 16.

REJECTION OF DEPENDENT CLAIM 18 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 18 under 35 U.S.C. § 103(a) as being unpatentable over

SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 5 of the Final Office Action, the Examiner cites col. 2, lines 43-47 and col. 4, lines 1-38 of SARUKKAI as disclosing that the features of claim 18, i.e., determining whether an HTTP session object exists for one of the browsers. Appellant respectfully disagrees.

The cited language merely discloses the following:

> The step of monitoring the number of documents requested may be performed across two or more web servers in the current session. In addition, the step of monitoring the number of documents requested may be performed across one or more timeouts in the current session.
>
> Hewlett-Packard Laboratories proxy on June 1, 1998. The traces are logs of client sessions on the Internet. The X axis represents each unique document referenced in the trace, and the Y axis corresponds to the number of times the documents have been accessed, plotted in a log--log scale.
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> A different way of looking at web surfing and document accesses is to view it from the perspective of client behavior patterns. Huberman et al. in "Strong Regularities in World Wide Web Surfing," Journal of Science, Vol. 280, Apr. 1998, observe in their "surfing law" that models of client surfing activity can be built in very similar lines to real options in financial economics. This perspective provides a rich normative model of web surfing and predicts the number of links that a user follows before deciding it would not be worthwhile to proceed further. The random variable that denotes the number of links that a user follows before stopping is shown to exhibit a long tail.
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> From the perspective of analyzing traces to determine the number of links followed in a client session, the work by Huberman et al. considers a session to be consecutive hits to the same server by the client. The analysis of each of these session lengths reveals a Zipf distribution. However, sessions are defined herein to include multiple servers accessed in a single session and to include long periods of inactivity from the clients. This captures the true nature of client surfing, which often crosses multiple server boundaries. Even with this more general definition of sessions, a similar pattern in session length distribution is observed. FIG. 3 is a plot of session depth versus number of requests at that

> depth in a session for the same traces plotted in FIG. 2. The X axis corresponds to session depth, and the Y axis corresponds to the number of documents requested at that depth, plotted on a log--log scale. Session depth may be defined as the number of documents requested by the client in the current session. It is clear that this characteristic also follows a long-tailed distribution, implying that most users follow very few links before perceiving that they have found all the information that is to be found.

While it is true that the above-noted language discusses sessions, session lengths and session depths, there is no specific language disclosing or suggesting determining whether an HTTP session object exists for one of the browsers. Appellant also submits that dependent claim 18 is allowable at least for the reason that this claim depends from allowable claim 9.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 18.

REJECTION OF DEPENDENT CLAIM 19 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 19 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 5 of the Final Office Action, the Examiner explains that the rejection of claim 19 is "for the same reasons set forth in claim 1 above". Appellant respectfully submits that the Examiner has failed to set forth a prima facie case of unpatentability.

Claim 19 depends from claim 9 and further recites writing into an HTTP session object that is associated with one of the browsers an identification of a requested web

page. The Examiner has not identified where in SARUKKAI or GLANCE there is found language which discloses or suggest this feature. Appellant also submits that dependent claim 19 is allowable at least for the reason that this claim depends from allowable claim 9.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 19.

Dependent claims 2, 3, 5, 6, 8, 10 and 11 stand or fall with the claims from which they depend.

The rejection of claims 13, 14 and 17 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,775,695 issued to SARUKKAI in view of U.S. Patent No. 6,415,368 issued to GLANCE et al., and further in view of U.S. Patent Application Publication 2002/0156881 to KLOPP LEMON et al. is improper and should be withdrawn.

REJECTION OF DEPENDENT CLAIM 13 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE, and further in view of KLOPP LEMON is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 6 of the Final Office Action, the Examiner acknowledges that SARUKKAI and GLANCE lack any disclosure regarding utilizing servlets to associate each user with a session tracking object of the session tracking objects. However, the

Examiner explains that KLOPP LEMON teaches servlets and that it would have been obvious to combine the teachings of these documents. Appellant respectfully disagrees.

While it is true that KLOPP LEMON teaches servlets, the Examiner has failed to explain why one having ordinary skill in the art would be motivated to utilize the servlets of KLOPP LEMON on the arrangement of SARUKKAI and GLANCE. Nor has the Examiner pointed to any language in any of the applied documents which would suggest any benefit to using the servlets of KLOPP LEMON on the arrangement of SARUKKAI and GLANCE, or that the servelts of KLOPP LEMON could even be utilized to associate each user with a session tracking object of the session tracking objects. Appellant also submits that dependent claim 13 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 13.

REJECTION OF DEPENDENT CLAIM 14 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 14 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE, and further in view of KLOPP LEMON is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 6 of the Final Office Action, the Examiner acknowledges that

SARUKKAI and GLANCE lack any disclosure regarding utilizing servlets to maintain information about requests of the browsers. However, the Examiner explains that KLOPP LEMON teaches servlets and that it would have been obvious to combine the teachings of these documents. Appellant respectfully disagrees.

While it is true that KLOPP LEMON teaches servlets, the Examiner has failed to explain why one having ordinary skill in the art would be motivated to utilize the servlets of KLOPP LEMON on the arrangement of SARUKKAI and GLANCE. Nor has the Examiner pointed to any language in any of the applied documents which would suggest any benefit to using the servlets of KLOPP LEMON on the arrangement of SARUKKAI and GLANCE, or that the servelts of KLOPP LEMON could even be utilized to maintain information about requests of the browsers. Appellant also submits that dependent claim 14 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 14.

REJECTION OF DEPENDENT CLAIM 17 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 17 under 35 U.S.C. § 103(a) as being unpatentable over SARUKKAI in view of GLANCE, and further in view of KLOPP LEMON is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

On page 6 of the Final Office Action, the Examiner acknowledges that SARUKKAI and GLANCE lack any disclosure regarding utilizing servlets to associate each user with a session tracking object of the session tracking objects or utilizing servlets to maintain information about requests of the browsers. However, the Examiner explains that KLOPP LEMON teaches servlets and that it would have been obvious to combine the teachings of these documents. Appellant respectfully disagrees.

While it is true that KLOPP LEMON teaches servlets, the Examiner has failed to explain why one having ordinary skill in the art would be motivated to utilize the servlets of KLOPP LEMON on the arrangement of SARUKKAI and GLANCE. Nor has the Examiner pointed to any language in any of the applied documents which would suggest any benefit to using the servlets of KLOPP LEMON on the arrangement of SARUKKAI and GLANCE, or that the servelts of KLOPP LEMON could even be utilized to associate each user with a session tracking object of the session tracking objects or to maintain information about requests of the browsers. Appellant also submits that dependent claim 17 is allowable at least for the reason that this claim depends from allowable claim 9.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 17.

The rejection of claim 20 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,760,765 issued to ASAI et al. in view of U.S. Patent Application Publication 2003/0074580 to KNOUSE et al., and further in view of U.S. Patent No. 6,415,368 issued to GLANCE et al. is improper and should be withdrawn.

REJECTION OF INDEPENDENT CLAIM 20 UNDER 35 U.S.C. § 103 IS IN ERROR

The rejection of claim 20 under 35 U.S.C. § 103(a) as being unpatentable over ASAI in view of KNOUSE, and further in view of GLANCE is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 20 is directed to a method for adapting to change in a demand on a web server and recites, in pertinent part: determining whether HTTP session objects exist for browsers, wherein the HTTP session objects enable session tracking, associating session tracking objects with the browsers that access a web server which includes a plurality of servlets, a caching algorithm, and a fast memory cache, wherein the session tracking objects include identifications of web pages requested by the browsers, if an HTTP session object does not exist for one of browsers which requested one of the web pages, creating with the web server an HTTP session object for the browser, analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server. These features are not disclosed or suggested by the combination of ASAI, KNOUSE and GLANCE.

Appellant does not dispute that ASAI relates to an access system application program interface (see abstract). However, the Examiner is not correct that this

document relates to a method for adapting to change in demand on a web server. It is clear from a fair reading of this document that ASAI does not disclose or suggest the above noted steps.

The Examiner identifies the session management unit 11 in Figs 1, 5 and 10 as being equivalent to a method for adapting to change in demand on a web server. Conveniently lacking from this assertion, however, is the location of any language in ASAI which specifically teaches this feature.

The Examiner also identifies col. 19, lines 36-42 and col. 19, line 51 to col. 20, line 40 as disclosing the associating step. Applicants disagree. The noted language of ASAI merely states the following:

> For example, if a stream request arrives at the cache server 10.sub.1 or 10.sub.2 for the streaming data 701 stored in the cache servers 10.sub.1 and 10.sub.2 in common, the session management tables 53.sub.2 and 53.sub.3 in FIG. 9 each register information about that request. The information registered in the session management tables 53.sub.2 and 53.sub.3 is updated as the streaming data is distributed.
>
> FIG. 10 is a diagram showing the session management tables 53.sub.2 and 53.sub.3 shown in FIG. 9. In each of the session management tables 53.sub.2 and 53.sub.3, a session identifier for identifying the session and a packet identifier indicating a packet most recently sent out are registered. Assume herein that the maximum number MAX of registrable sessions in each of the session management tables 53.sub.1 to 53.sub.8 is 8.
>
> In the session management tables 53.sub.2 and 53.sub.3, sessions are identified in a reverse order (symmetrically in a table field). That is, the session identified by a session identifier I (0.ltoreq.{character pullout} I<MAX) in the session management table 53.sub.2 is identified by a session identifier (MAX-I-1) in the session management table 53.sub.3. For example, packet identifiers "100" and "510" of the sessions identified by session identifiers "0" and "1" in the session management table 53.sub.2 are registered in the session management table 53.sub.3 as identified by session identifiers "7" and "6", respectively.

Table boundary values 54.sub.2 of the session management table 53.sub.2 and 54.sub.3 session management table 53.sub.3 indicate numbers of the session identifiers at which the information registered in the session management tables 53.sub.2 and 53.sub.3 is divided into two. As described above, in the session management tables 53.sub.2 and 53.sub.3, sessions are registered in the reverse order. Therefore, if the table boundary value of one session management table is set to F (0.ltoreq.{character pullout} F<MAX), the table boundary value of the other session management table is set to (MAX-F). In FIG. 10, the table boundary value 543 of the session management table 53.sub.3 is set to "3", while the table boundary value 54.sub.3 of the session management table 53.sub.3 is set to "5".

The data distribution units 12.sub.1 to 12.sub.4 of the cache servers 10.sub.1 to 10.sub.4 transmit to the terminal only streaming data with respect to a session with the session identifier I equal to or smaller than the table boundary value F. More specifically, the cache servers 10.sub.1 to 10.sub.4 repeat the following first and second steps.

First step: Compare the session identifier I with the table boundary value F. If I<F, extract, from the streaming data storage unit, a packet that immediately comes after the packet corresponding to the session identifier I in the session management table, and send the extracted packet to the terminal.

Second step: Update the value of the packet identifier corresponding to the session identifier I in the session management table to the value of the packet identifier of the packet sent out in the above first step.

For example, in FIG. 10, for the sessions identified by the session identifiers "0" to "2" in the session management table 53.sub.2 of the cache server 10.sub.1 (surrounded by a thick line in FIG. 10 on the left), the data distribution unit 121 of the cache server 10.sub.1 transmits the relevant streaming data and updates the values of the packet identifiers. Similarly, for the sessions identified by the session identifiers "0" to "4" in the session management table 53.sub.3 of the cache server 10.sub.2 (surrounded by a thick line in FIG. 10 on the right), the data distribution unit 12.sub.2 of the cache server 10.sub.2 transmits the relevant streaming data and updates the values of the packet identifiers.

Appellant is at a loss to understand how such language can be interpreted to disclose associating session tracking objects with the browsers that access a web server which includes a plurality of servlets, a caching algorithm, and a fast memory

cache, wherein the session tracking objects include identifications of web pages requested by the browsers. As the Examiner will note from page 5, lines 3-16 of the instant specification, session tracking objects constitute information about the requests for web pages by the browsers and this information identifies each of the browsers. Again, this distinction is not without a difference because the instant invention enables session tracking of the session objects in order to detect changes in demand more rapidly.

The Examiner also identifies col. 16, lines 25-32 as disclosing the analyzing step. Appellant disagrees. The noted language of ASAI merely states the following:

> In FIG. 6, the number of distribution streams currently being distributed by the cache server 10_2 is 120+1000=1120, and the number of distribution streams of the streaming data stored in both cache servers 10_2 and 10_3 is 120 for the cache server 10_2 and 500 for the cache server 10_3. Therefore, 620 is compared with MAX for the determination in step S122, while 1120 is compared with {((n-1)/n) x MAX} for the determination in step S123.

Appellant also fails to understand how such language can be interpreted to disclose analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server, if an HTTP session object does not exist for one of browsers which requested one of the web pages, creating with the web server an HTTP session object for the browser. At the very least, the Examiner should specifically explain how such language can be so interpreted.

The Examiner acknowledges that ASAI fails to disclose or suggest if an HTTP session object does not exist for one of browsers which requested one of the web pages, creating with the web server an HTTP session object for the browser. However,

the Examiner explains that this feature is taught on paragraphs [0332] and [0335] of KNOUSE. Appellant disagrees. The noted language of KNOUSE merely states the following:

> [0332] In step 3110, an authentication scheme object (ObAuthenticationScheme) is created. The constructor for the authentication scheme object is passed the resource request object. In step 3112, a user session object (ObUserSesssion) is created. The constructor for the user session object is passed the session token. The key for decrypting the session token is fetched from the directory server (if it is not already local), the session token is decrypted and the contents of the session token is stored in the new object. In step 3114, the system determines whether the cookie is valid. There are many ways for determining if the cookie is valid. In one example, the application can request information from the user session object such as the start time or last use time to determine whether the session is still valid. If the cookie was not valid, then user must be authenticated and authorized in step 3116. If the cookie is valid, then in step 3118 the application requests the authentication level from the authentication scheme object. For example, the application can call the get Level( ) method from the ObAuthenticationScheme object. This authentication level pertains to the authentication rule or policy stored in the directory server for the resource. In other embodiments, the different portions of the authentication scheme or all portions of the authentication scheme can be reported to the application by the API. In step 3120, the application requests the authentication level from the session object; for example, calling the getLevel( ) method from the ObUserSession object. This level information is a number originally stored (and encrypted) in the cookie. The ObUserSession provides the level in an unencrypted form.
>
> [0335] If the resource is not protected the application will allow the user to access the requested resource. If the resource is protected, the application accesses the authentication scheme in step 3208. One means for determining the resource authentication scheme is to use the various methods of the ObAuthenticationScheme class, described above. In step 3210, the application requests authentication credentials from the user and stores the credentials in a table in step 3212. The authentication credentials can be any data needed to authenticate. For example, a basic authentication credentials may include a username and a password. The exact type of credentials not important to the present invention. In one embodiment, the credentials is stored in a hash table. In step 3114, a user session object is created, if it has not already been created. The user session object is passed the resource request object and credentials stored in the table. The constructor of the user session object uses the resource

> request object and the credentials to authenticate the user in step 3216. The process of authentication is performed by the Access Server as described above. If the user is not properly authenticated (step 3222), then the application will send a response to a web browser in step 322 that the authentication failed and the user will not be given access to the resource.

Appellant also fails to understand how such language can be interpreted to disclose if an HTTP session object does not exist for one of browsers which requested one of the web pages, creating with the web server an HTTP session object for the browser. Again, at the very least, the Examiner should specifically explain how such language can be so interpreted.

GLANCE does not cure the deficiencies of ASAI and KNOUSE. As explained above, GLANCE merely discloses a system and method of caching based on a recommender system. The disclosed system employees a democratic caching generally shown by reference numeral 10. A recommender system 16 provides value information pertaining to items to be stored in cache 24 based on user input (col. 4, liens 43-53) that includes implicit site recommendations (col. 5, lines 24-55) and explicit URL recommendations (col. 5, lines 65 et seq.). GLANCE, like ASAI and KNOUSE, does not disclose or suggest, among other things, associating session tracking objects with browsers that access a web server, much less, that the session tracking objects include identifications of web pages requested by the browsers.

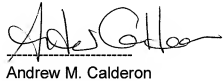
As GLANCE fails to cure the deficiencies of ASAI and KNOUSE, there can be no motivation to combine these references. Furthermore, even if ASAI, KNOUSE and GLANCE were properly combinable, the combination would not result in the invention as recited in at least claim 20.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellant submits that no proper combination of these documents renders unpatentable the combination of features recited in at least independent claim 20.

CONCLUSION

Each of claims 1-20 are patentable under 35 U.S.C. §103(a). Specifically, the applied art of record, even in properly combined, fails to disclose or suggest the unique combination of features recited in Appellant's claims 1-20. Accordingly, Appellant respectfully requests that the Board reverse the decision of the Examiner to reject claims 1-20 under 35 U.S.C. §103(a), and remand the application to the Examiner for withdrawal of the above-noted rejections.

Respectfully submitted,
Michael Christopher MARTIN, et al.



Andrew M. Calderon
Reg. No. 38,093

August 13, 2007
GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
703-716-1191

Attachments: Claims Appendix,

Evidence Appendix, and

Related Proceedings Appendix

VIII CLAIMS ON APPEAL

1. A method for adapting to change in a demand on a web server, comprising:

associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers; and

analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server.

2. The method of claim 1, wherein the identifications of web pages requested by the browsers include the identifications of a last N web pages requested by each of the browsers.

3. The method of claim 2, wherein N is five.

4. The method of claim 1, wherein the session tracking objects are HTTP session objects.

5. The method of claim 1, wherein the caching priorities are proportional to relative frequencies of browser requests for web pages.

6. The method of claim 1, wherein the caching priorities are proportional to recency of browser requests for web pages.

7. The method of claim 1, wherein the act of analyzing is performed periodically.

8. The method of claim 1, wherein the act of analyzing is performed in response to a triggering event.

9. A method for adapting to change in a demand on a web server, comprising:

associating session tracking objects with browsers that access a web server, wherein the session tracking objects include identifications of web pages requested by the browsers;

analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server; and

altering a server cache responsive to the caching priorities.

10. The method of claim 9, wherein the act of altering further includes re-loading at least part of the server cache.

11. The method of claim 9, wherein the act of altering further includes altering a caching algorithm associated with the server cache.

12. The method of claim 1, wherein the method ensures that a web site adapts to changes in demand.

13. The method of claim 1, further comprising utilizing servlets to associate each user with a session tracking object of the session tracking objects.

14. The method of claim 1, further comprising utilizing servlets to maintain information about requests of the browsers.

15. The method of claim 1, further comprising determining whether an HTTP session object exists for one of the browsers.

16. The method of claim 1, further comprising writing into an HTTP session object that is associated with one of the browsers an identification of a requested web page.

17. The method of claim 9, further comprising one of :

utilizing servlets to associate each user with a session tracking object of the session tracking objects; and

utilizing servlets to maintain information about requests of the browsers.

18. The method of claim 9, further comprising determining whether an HTTP session object exists for one of the browsers.

19. The method of claim 9, further comprising writing into an HTTP session object that is associated with one of the browsers an identification of a requested web page.

20. A method for adapting to change in a demand on a web server, comprising:

determining whether HTTP session objects exist for browsers, wherein the HTTP session objects enable session tracking;

associating session tracking objects with the browsers that access a web server which includes a plurality of servlets, a caching algorithm, and a fast memory cache, wherein the session tracking objects include identifications of web pages requested by the browsers;

if an HTTP session object does not exist for one of browsers which requested one of the web pages, creating with the web server an HTTP session object for the browser;

analyzing the identifications of web pages requested by the browsers to determine caching priorities for the web server; and

altering a server cache responsive to the caching priorities,

wherein the method ensures that a web site adapts to changes in demand.

IX EVIDENCE APPENDIX

This section lists evidence submitted pursuant to 37 C.F.R. §§1.130, 1.131, or 1.132, or any other evidence entered by the Examiner and relied upon by Appellant in this appeal, and provides for each piece of evidence a brief statement setting forth where in the record that evidence was entered by the Examiner. Copies of each piece of evidence are provided as required by 37 C.F.R. §41.37(c)(ix).

NO.	EVIDENCE	BRIEF STATEMENT SETTING FORTH WHERE IN THE RECORD THE EVIDENCE WAS ENTERED BY THE EXAMINER
1	N/A	N/A

X RELATED PROCEEDINGS APPENDIX

Pursuant to 37 C.F.R. §41.37(c)(x), copies of the following decisions rendered by a court of the Board in any proceeding identified above under 37 C.F.R. §41.37(c)(1)(ii) are enclosed herewith.

NO.	TYPE OF PROCEEDING	REFERENCE NO.	DATE
1	N/A	N/A	N/A